What we claim is:

1. A genetically altered neoplastic cell useful as an immunostimulatory agent against a tumor of interest, said genetically altered neoplastic cell comprising :

a neoplastic cell of mammalian origin which is representative of the cells constituting a tumor of interest;

a genetically altered genome including at least one extra nucleotide segment comprising a viral vector and not less than one DNA sequence encoding molecule B7.1, intracellular adhesion molecule-l (ICAM-l) and leukocyte function-associated antigen-3 (LFA-3) as specific products;

the capacity to overexpress molecule B7.1, intracellular adhesion molecule-l (ICAM-l) and leukocyte function-associated antigen-3 (LFA-3) as discrete products; and

the capability to interact with and to activate CD4+ and CD8+ T-cell lymphocytes in-situ.

2. A genetically altered neoplastic cell preparation useful as a prophylactic vaccine in-vivo to prevent the generation of a tumor within the body of a living mammalian subject, said genetically altered neoplastic cell preparation comprising:

a plurality of transduced neoplastic cells of mammalian origin which are representative of the tumor to be prevented within the body of the living mammalian subject and which have the capability to interact with and to activate CD4+ and CD8+ T-cell lymphocytes in-situ, said transduced neoplastic cells

(i) being transduced with a viral vector carrying not less than one DNA sequence encoding molecule B7.1, intracellular adhesion molecule-l (ICAM-l) and leukocyte function-associated antigen-3 (LFA-3); and

(ii) overexpressing molecule B7.1, intracellular adhesion molecule-l (ICAM-l) and leukocyte function-associated antigen-3 (LFA-3) as discrete peptides and functional costimulatory molecules.

3. A genetically altered neoplastic cell preparation useful as a therapeutic anti-tumor agent in-vivo to treat clinically a pre-existing tumor within the body of a living mammalian subject, said genetically altered neoplastic cell preparation comprising:

a plurality of transduced neoplastic cells of mammalian origin which are representative of the cells in the pre-existing tumor within the body of the living mammalian subject and which have the capability to interact with and to activate CD4+ and CD8+ T-cell lymphocytes in-situ, said transduced neoplastic cells

(i) being transduced with a viral vector carrying not less than one DNA sequence encoding molecule B7.1, intracellular adhesion molecule-l (ICAM-l) and leukocyte function-associated antigen-3 (LFA-3); and

(ii) overexpressing molecule B7.1, intracellular adhesion molecule-l (ICAM-l) and leukocyte function-associated antigen-3 (LFA-3) as discrete peptides and functional costimulatory molecules.

4. A method for making a genetically altered neoplastic cell useful as an agent against a tumor of interest, said method comprising the steps of:

obtaining a neoplastic cell of mammalian origin which is representative of the cells constituting a tumor of interest;

altering the genome of said neoplastic cell by introduction of at least one extra nucleotide segment comprising a viral vector and not less than one DNA sequence encoding molecule B7.1, intracellular adhesion molecule-l (ICAM-l) and leukocyte function-associated antigen-3 (LFA-3) as specific products;

allowing said altered genome of said neoplastic cell to express molecule B7.1, intracellular adhesion molecule-l (ICAM-l) and leukocyte function-associated antigen-3 (LFA-3) as discrete products.

5. A method for making a transduced neoplastic cell preparation useful as an immunostimulatory agent in-vivo effective against a tumor of interest, said method comprising the steps of:

obtaining a plurality of neoplastic cells of mammalian origin which is representative of the tumor of interest;

transducing such neoplastic cells with a viral vector carrying not less than one DNA sequence encoding B7.1, intracellular adhesion molecule-l (ICAM-l) and leukocyte function-associated antigen-3 (LFA-3); and

allowing said transduced neoplastic cells to overexpress molecule B7.1, intracellular adhesion molecule-l (ICAM-l) and leukocyte function-associated antigen-3 (LFA-3) as discrete peptides and functional costimulatory molecules.

6. A method of in-vivo prophylaxis to prevent the generation of a tumor in a living mammalian subject, said in-vivo prophylaxis method comprising the steps of:

obtaining a vaccine comprising a plurality of transduced neoplastic cells of mammalian origin which are representative of the tumor to be prevented within the body of the living mammalian subject, wherein said transduced neoplastic cells

(i) have been transduced with a viral vector carrying not less than one DNA sequence encoding molecule B7.1, intracellular adhesion molecule-l (ICAM-l) and leukocyte function-associated antigen-3 (LFA-3), and

(ii) overexpressing molecule B7.1, intracellular adhesion molecule-l (ICAM-l) and leukocyte function-associated antigen-3 (LFA-3) as discrete peptides and functional costimulatory molecules;

administering said vaccine to the body of the living mammalian subject; and

allowing said transduced neoplastic cells of said administered vaccine to interact with and to activate CD4+ and CD8+ T-cell lymphocytes in-vivo within the living mammalian subject.

7. A method of in-vivo therapeutic treatment effective against a pre-existing tumor in a living mammalian subject, said in-vivo therapeutic treatment method comprising the steps of:

obtaining a cell preparation comprising a plurality of transduced neoplastic cells of mammalian origin which are representative of the cells in the pre-existing tumor within the body of the living mammalian subject, wherein said transduced neoplastic cells

(i) have been transduced with a viral vector carrying not less than one DNA sequence encoding molecule B7.1, intracellular adhesion molecule-l (ICAM-l) and leukocyte function-associated antigen-3 (LFA-3), and

(ii) overexpressing molecule B7.1, intracellular adhesion molecule-l (ICAM-l) and leukocyte function-associated antigen-3 (LFA-3) as discrete peptides and functional costimulatory molecules;

administering said cell preparation to the body of the living mammalian subject as an anti-tumor agent; and

allowing said transduced neoplastic cells of said administered cell preparation to interact with and to activate CD4+ and CD8+ T-cell lymphocytes in-vivo within the living mammalian subject.